

McGraw-Hill Dictionary of Scientific and Technical Terms

Fifth Edition

Sybil P. Parker
Editor in Chief

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On the cover: Photomicrograph of crystals of vitamin B₁.
(Dennis Kunkel, University of Hawaii)

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tra.

epiphysis [ANAT] 1. The end portion of a long bone in vertebrates. 2. See pineal body. {ə'pif-əsəs}
epiphyte [ECOL] A plant which grows nonparasitically on another plant or on some nonliving structure, such as a building or telephone pole, deriving moisture and nutrients from the air. Also known as aerophyte. {ə'pə,fi't}
epiphytic [PL PATH] 1. Any infectious plant disease that occurs sporadically in epidemic proportions. 2. Of or pertaining to an epidemic plant disease. {ə'pə,fi'təd-ik}
epiplankton [BIOL] Plankton occurring in the sea from the surface to a depth of about 100 fathoms (180 meters). {ə'pə'plāŋk-tən}
epipleural [ANAT] Arising from a rib. [VERT ZOO] An intramuscular bone arising from and extending between some of the ribs in certain fishes. {ə'pə'plūr-əl}
epiploic foramen [ANAT] An aperture of the peritoneal cavity, formed by folds of the peritoneum and located between the liver and the stomach. Also known as foramen of Winslow. {ə'pə'plō-ik fə'rāmən}
epipodite [INV ZOO] A branch of the basal joint of the propodite of thoracic limbs of many arthropods. {ə'pip-ə,dit}
epipodium [BOT] The apical portion of an embryonic phyllopodium. [INV ZOO] 1. A ridge or fold on the lateral edges of each side of the foot of certain gastropod mollusks. 2. The elevated ring on an ambulacral plate in Echinoidea. {ə'pə'pōd-ē-əm}
Epipolasina [INV ZOO] A suborder of sponges in the order Clavasinellida having radially arranged monactinal or diactinal megascleres. {ə'pə'pə'laz-ə-nə}
epiproct [INV ZOO] A plate above the anus forming the dorsal part of the tenth or eleventh somite of certain insects. {ə'pə'prəkt}
epipubis [VERT ZOO] A single cartilage or bone located in front of the pubis in some vertebrates, particularly in some amphibians. {ə'pə'pyū-bəs}
EPIRB See emergency position-indicating radio beacon. {ē,parb}
episciera [ANAT] The loose connective tissue lying between the conjunctiva and the sclera. {ə'pə'skier-ə}
episcopes See epidiastopes. {ə'pə'skōp}
episcotister [OPTICS] A device for reducing the intensity of light by a known fraction, consisting of a rapidly rotating disk with transparent and opaque sectors. {ə'pə'skō'tis-tər}
episepalous [BOT] Having stamens growing on or adnate to the sepals. {ə'pə'sep-ə-ləs}
episiotomy [MED] Medial or lateral incision of the vulva during childbirth, to avoid undue laceration. {ə'pēz-ē'ad-ə-mē}
episode [GEOL] A distinctive event or series of events in the geologic history of a region or feature. {ə'pə,sōd}
episome [GEN] A circular genetic element in bacteria, presumably a deoxyribonucleic acid fragment, which is not necessary for survival of the organism and which can be integrated in the bacterial chromosome or remain free. {ə'pə,sōm}
epispadias [MED] A congenital defect of the anterior urethra in which the canal terminates on the dorsum of the penis and posterior to its normal opening. {ə'pə'spād-ē-əs}
episperm See testa. {ə'pə,spərm}
epi spiral [MATH] A plane curve whose equation in polar coordinates (r, θ) is $r \cos n\theta = a$, where a is a constant and n is an integer. {ə'pē,spīrəl}
epistasis [GEN] The suppression of the effect of one gene by another. [MED] A checking or stoppage of a hemorrhage or other discharge. [PATH] A scum or film of substance floating on the surface of urine. {ə'pist-əs-əs}
episternum [VERT ZOO] A dermal bone or pair of bones ventral to the sternum of certain fishes and reptiles. {ə'pə'stər-nəm}
epistilbite [MINERAL] $\text{CaAl}_2\text{Si}_6\text{O}_{16} \cdot 5\text{H}_2\text{O}$ A mineral of the zeolite family that contains calcium and aluminosilicate and crystallizes in the monoclinic system; occurs in white prismatic crystals or granular forms. {ə'pə'stil,bīt}
epistome [INV ZOO] 1. The area between the mouth and the second antennae in crustaceans. 2. The plate covering this region. 3. The area between the labrum and the epicranium in many insects. 4. A flap covering the mouth of certain bryozoans. 5. The area just above the labrum in certain dipterans. {ə'pə,sstōm}
epitaxial diffused-junction transistor [ELECTR] A junction

transistor produced by growing a thin, high-purity layer of semiconductor material on a heavily doped region of the same material. {ə'pə'tak-sē-əl dā'fyzd 'jəŋk-shən trān'zistər}
epitaxial diffused-mesa transistor [ELECTR] A diffused-mesa transistor in which a thin, high-resistivity epitaxial layer is deposited on the substrate to serve as the collector. {ə'tak-sē-əl dā'fyzd 'mā-sə trān'zistər}
epitaxial layer [SOLID STATE] A semiconductor layer having the same crystalline orientation as the substrate on which it is grown. {ə'pə'tak-sē-əl,lā-ər}
epitaxial transistor [ELECTR] Transistor with one or more epitaxial layers. {ə'pə'tak-sē-əl trān'zistər}
epitaxy [CRYSTAL] Growth of one crystal on the surface of another crystal in which the growth of the deposited crystal is oriented by the lattice structure of the substrate. {ə'pē,tāk-sē}
epithalamus [ANAT] A division of the vertebrate brain including the habenula, the pineal body, and the posterior commissure. {ə'pə'thal-ə-məs}
epitheca [INV ZOO] 1. An external, calcareous layer covering the basal portion of the theca of many corals. 2. A protective covering of the epicone. 3. The outer portion of a frustule. {ə'pə'thē-kə}
epithellochorial placenta [EMBRYO] A type of placenta in which the maternal epithelium and fetal epithelium are in direct contact. Also known as villous placenta. {ə'pə'thē-lō-ō'plā-sen-tə}
epithelioid cell [HISTOL] A macrophage that resembles an epithelial cell. Also known as alveolated cell. {ə'pē,thē-ō'id,sel}
epithelioma [MED] A tumor derived from epithelium, usually a skin cancer, occasionally cancer of a mucous membrane. {ə'pə'thē-lē-ō-mə}
epitheliomuscular cell [INV ZOO] An epithelial cell that elongate base that contains contractile fibrils; common in cnidarians. {ə'pə'thē-lē-ō'məs-kyə-lər'sel}
epithellum [HISTOL] A primary animal tissue, distinguished by cells being close together with little intercellular space; covers free surfaces and lines body cavities and ducts. {ə'thē-lē-əm}
epithema [VERT ZOO] A horny outgrowth on the beak of certain birds. {ə'pə'thē-mə}
epithermal [GEOL] Pertaining to mineral veins and deposits formed from warm waters at shallow depth at temperatures ranging from 50–200°C, and generally at some distance from the magmatic source. {ə'pə'thərməl}
epithermal deposit [GEOL] Ore deposit formed in openings in rocks by deposition at shallow depths from circulating hot solutions. {ə'pə'thərməldə'pāz-ət}
epithermal neutron [NUCLEO] A neutron having a kinetic energy in the range immediately above the thermal range, between 0.02 and 100 electronvolts. {ə'pə'thərməl'neut-rən}
epithermal reactor [NUCLEO] A nuclear reactor in which a substantial fraction of fissions is induced by neutrons having more than thermal energy. {ə'pə'thərməl'rē-ak-tər}
epithermal thorium reactor [NUCLEO] A sodium-cooled reactor based on operation with neutrons in the high-energy range; a uranium-thorium fuel mixture is used with graphite or beryllium as moderator. {ə'pə'thərməl'thō-rē-əm rē-ak-tər}
epitoke [INV ZOO] The posterior portion of the body of chaetes; contains the gonads. {ə'pə,tōk}
epitoky [INV ZOO] In certain polychaetes, development of the posterior sexual part from the anterior sexless part. {ə'tāk-ē}
epitope [IMMUNOL] The portion of the antigen that determines its capacity to combine with the specific site of its corresponding antibody in an antigen-antibody action. {ə'pə,tōp}
epitrichium [EMBRYO] The outer layer of the ectoderm of many mammals. {ə'pə'trik-ē-əm}
epitrochlear [ANAT] Of or pertaining to a ligament that lies above the trochlea of the elbow joint. {ə'pē,troch-lē-ər}
epitrochoid [MATH] A curve traced by a point on a circle to a circle at a point other than the center when the circle without slipping on the outside of a fixed circle. {ə'trō,kōid}
epituberculosis [MED] A massive pulmonary tuberculosis.

films in active juvenile tuberculosis, producing bronchial obstruction. {ə'pə'tə,bərk-yə'lō-sə}
epitympanum [ANAT] The attic of the middle ear cavity. {ə'pə'tim-pən-əm}
epitrich [INV ZOO] 1. The upper or apical shell of a diatom. 2. The upper shell of a diatom. {ə'pē,trik}
epitrichous [ECOL] Growing on wood; used especially of fungi. {ə'pē,trik-əs}
epitrichous [BIOL] Living on the body of an animal. {ə'pē,trik-əs}
epitrichous [GEOL] 1. The zone of metamorphism characterized by moderate temperature, low hydrostatic pressure, and low stress. 2. The outer depth zone of metamorphism. {ə'pē,trik-əs}
epitrichous [VET MED] 1. Affecting many animals simultaneously; widely diffuse and rapid. 2. An extensive outbreak of an epizootic disease. {ə'pē,trik-əs}
epitrichology [VET MED] The study of epizootic diseases. {ə'pē,trik-ə-lō-jē}
epitrichous antenna [ELECTROMAG] An antenna with a direction parallel to the electric field vector of the radio wave. {ə'pē,trik-əs,an-ten-ə}
epitrichous bend See E bend. {ə'pē,trik-əs,bend}
epitrichous junction [ELECTROMAG] Waveguide junction in which the change in structure occurs in the plane of the wave. Also known as series T junction. {ə'pē,trik-əs,jən-ksh-n}
epitrichous [MATER] A lubricating oil or grease used to improve ability to adhere to the surface under bearing pressures. Derived from epithelium. {ə'pē,trik-əs}
epitrichous electron probe microanalysis {ə'pē,trik-əs,ē-lēk-trōn prōbē mīkrō-an-ā-lī-sīs}
epitrichous O-ethyl-O-para-nitrophenyl phenylphosphonate [ASTRON] A particular instant for which the positions of, for example, star positions in an astronomical map. {ə'pē,trik-əs,ō-ē-thēl-ō-pā-rā-nī-trō-fē-nēl fē-nēl-fōs-fō-nāt}
epitrichous [GEOL] A major subdivision of geological time. [PHYS] See time. {ə'pē,trik-əs}
epitrichous [ANAT] The horny layer of the nail; the plate at its margin; represents the remaining condition. [EMBRYO] A horny cone that develops from the second to the eighth month of gestation; the position of the future nail. {ə'pē,trik-əs}
epitrichous horn [ANAT] A blind longitudinal duct in the mesosalpinx near the base of the remnants of the reproductive part of the female; homolog of the head of the epididymus. Also known as parovarium; Rosenmüller's duct. {ə'pē,trik-əs,hɔrn}
epitrichous [ORG CHEM] Reaction yielding an addition product such as the conversion of ethylene to ethane. {ə'pē,trik-əs}
epitrichous [ORG CHEM] 1. A reactive group in which each of two carbon atoms which are joined to each other by a three-membered cyclic ether. Also known as epoxide. {ə'pē,trik-əs,ē-oks-ēd}
epitrichous [ORG CHEM] A prefix indicating presence in a molecule. {ə'pē,trik-əs}
epitrichous [MATER] An adhesive material used in dentistry. {ə'pē,trik-əs,əd'hē-siv}
epitrichous See ethylene oxide. {ə'pē,trik-əs,ē-oks-ēd}
epitrichous [ORG CHEM] A polyether resin formed by the polymerization of bisphenol A and epichlorohydrin, and low shrinkage during curing. {ə'pē,trik-əs,ē-oks-ēd}
epitrichous [ENG] A pyrheliometer in which radiation is allowed to fall on two thermopiles, the outer covered with magnesium oxide and the inner with lampblack; a system of thermopiles is provided so that measurements of diffuse solar radiation may be obtained. {ə'pē,trik-əs,ē-oks-ēd}
epitrichous [MATER] A paramagnetic resonance. {ə'pē,trik-əs,ē-oks-ēd}
epitrichous See Einstein-Podolsky-Rosen paradox. {ə'pē,trik-əs,ē-oks-ēd}
epitrichous [MATER] Erasable programmable read-only memory. {ə'pē,trik-əs,ē-oks-ēd}